

We claim:

1. A method of backgrinding a wafer, said wafer characterized by a front side and a backside, said method comprising the steps of:

5 providing tape and a chuck, said tape suitable for protecting a wafer during backgrinding and said chuck suitable for use during backgrinding of the wafer;

placing the tape onto the chuck;

placing the wafer onto the tape with the front side of the
10 wafer facing the tape;

thereafter backgrinding the backside of the wafer;

removing the wafer from the tape while leaving the tape on the chuck;

thereafter cleaning the front side of the wafer; and

15 drying the wafer.

2. The method of claim 1 wherein the step of cleaning the front side of the wafer comprises spraying the front side of the wafer with water under a pressure of about 500 PSI to about 1500 PSI while scrubbing the front side of the wafer, and wherein the
20 method further comprises:

before removing the wafer from the tape, spraying the backside of the wafer with water under a pressure of about 40 PSI to about 60 PSI while scrubbing the backside of the wafer.

3. A method of preparing a wafer, said method comprising the steps of:

- a) providing a wafer having a front side and a backside;
- b) processing the wafer such that the wafer has a flatness and a thickness suitable for building-up a device on the front side of the wafer;
- c) building-up a device onto the front side of the wafer;
- d) providing a chuck and a tape, wherein the chuck is suitable for supporting the tape during a backgrinding process, and wherein the tape is suitable for supporting the wafer;
- e) after building up the device, placing the tape onto the chuck;
- f) placing the front side of the wafer onto the tape;
- g) securing the front side of the wafer to the tape;
- h) grinding the backside of the wafer;
- i) removing the wafer from the tape;
- j) thereafter cleaning the front side of the wafer; and
- k) drying the wafer.

4. The method of claim 3 wherein the step of cleaning the front side of the wafer comprises spraying the front side of the wafer with water under a pressure of about 500 PSI to about 1500 PSI while scrubbing the front side of the wafer, and wherein the method further comprises:

before removing the wafer from the tape, spraying the backside of the wafer with water under a pressure of about 500 PSI to about 1500 PSI while scrubbing the backside of the wafer.

5 5. The method of claim 3 comprising the further steps of:

providing a second wafer having a front side and a backside;

10 processing the second wafer such that the second wafer has a flatness and a thickness suitable for building-up a device on the front side of the second wafer;

building-up a device onto the front side of the second wafer; and

repeating steps e) through k) on the second wafer while leaving the tape on the chuck.

15 6. The method of claim 3 wherein the step of removing the wafer from the tape comprises the step of removing the wafer from the tape without removing the tape from the chuck.

7. The method of claim 3 comprising the further steps of:

20 providing a second wafer having a front side and a backside, wherein a device is built up on the front side of the second wafer;

after removing the wafer from the tape, leaving the tape on the chuck and then securing the front side of the second wafer to the tape;

25 grinding the backside of the second wafer; and

removing the second wafer from the tape.

8. The method of claim 7 wherein the step of removing the second wafer from the tape comprises the step of removing the second wafer from the tape without removing the tape from the chuck.

5 9. The method of claim 3 comprising the further steps of:

providing a plurality of wafers, wherein each of the plurality of wafers has a front side and a backside and wherein each of the plurality of wafers has a device built-up on the front side;

10 sequentially placing on the tape and then removing from the tape the front side of each of the plurality of wafers while leaving the tape on the chuck; and

grinding the backside of each of the plurality of wafers before removing each of the plurality of wafers from the tape.

15

10. The method of claim 3 wherein the step of providing a chuck and a tape comprises providing a resilient tape.

11. A method of backgrinding a wafer, said wafer characterized by a front side and a backside, said method comprising the steps of:

20

providing a mesh and a chuck, said mesh suitable for protecting a wafer during backgrinding and said chuck suitable for use during backgrinding of the wafer;

placing the mesh onto the chuck;

25

placing the wafer onto the mesh with the front side of the wafer facing the mesh;

thereafter backgrinding the backside of the wafer;

removing the wafer from the mesh while leaving the mesh on
the chuck;

thereafter cleaning the front side of the wafer; and

5 drying the wafer.

12. The method of claim 11 wherein the step of cleaning the
front side of the wafer comprises spraying the front side of the
wafer with water under a pressure of about 500 PSI to about 1500
PSI while scrubbing the front side of the wafer, and wherein the
10 method further comprises:

before removing the wafer from the tape, spraying the
backside of the wafer with water under a pressure of
about 500 PSI to about 1500 PSI while scrubbing the
backside of the wafer.

15